

FIG. 1

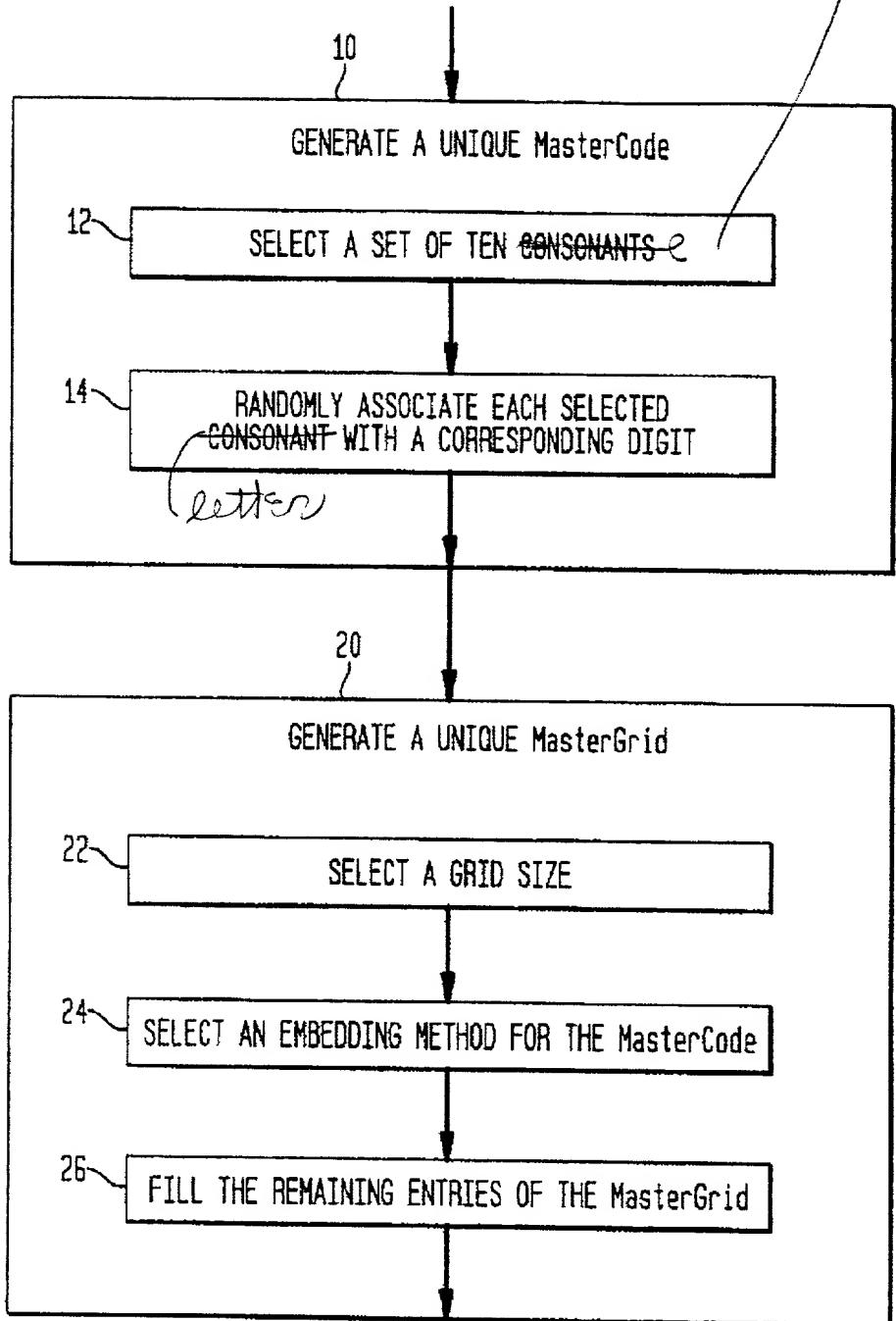


FIG. 2

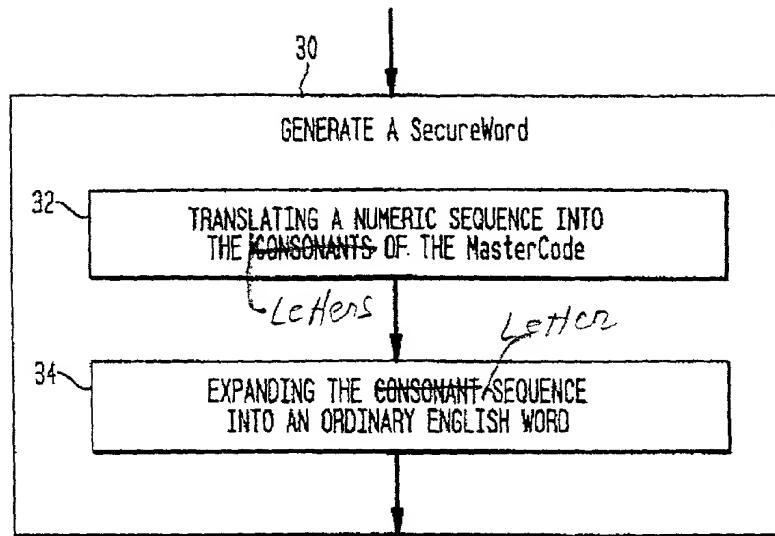


FIG. 3

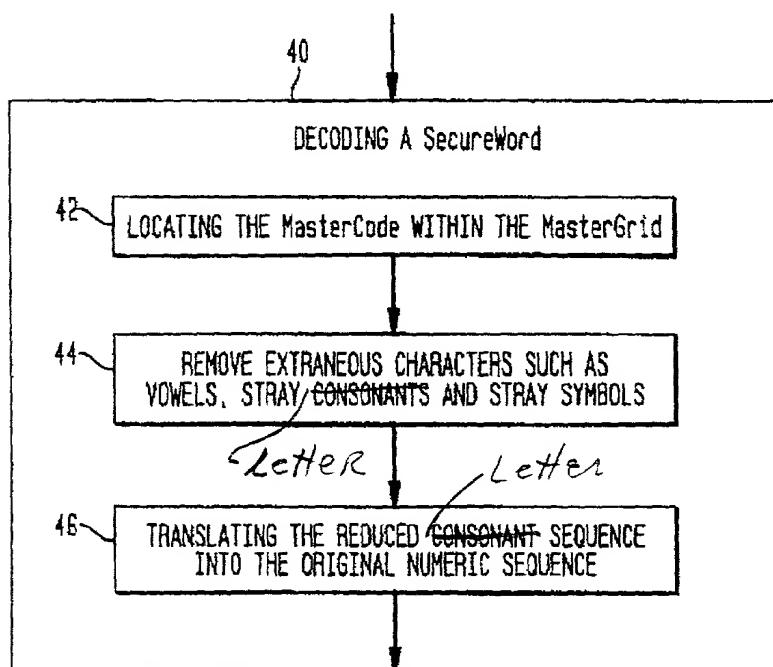


FIG. 4

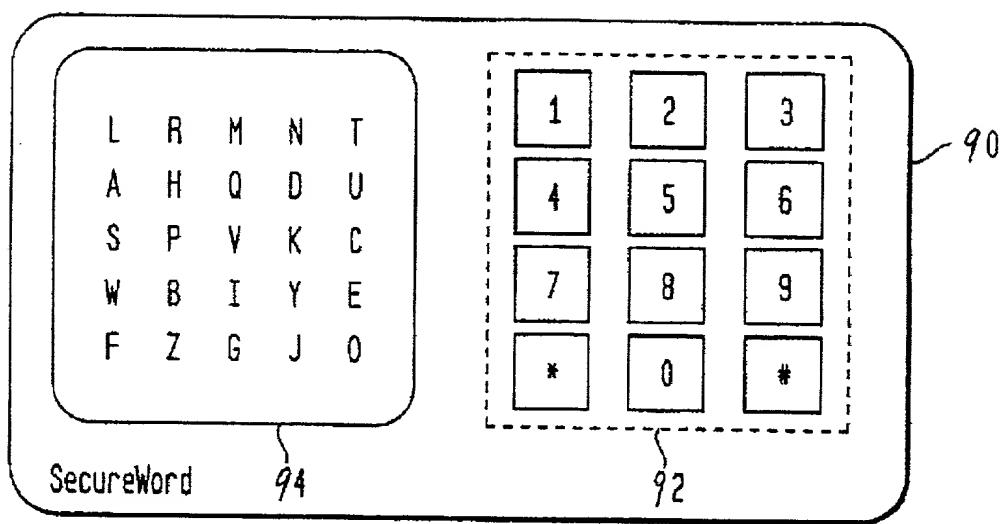


FIG. 5

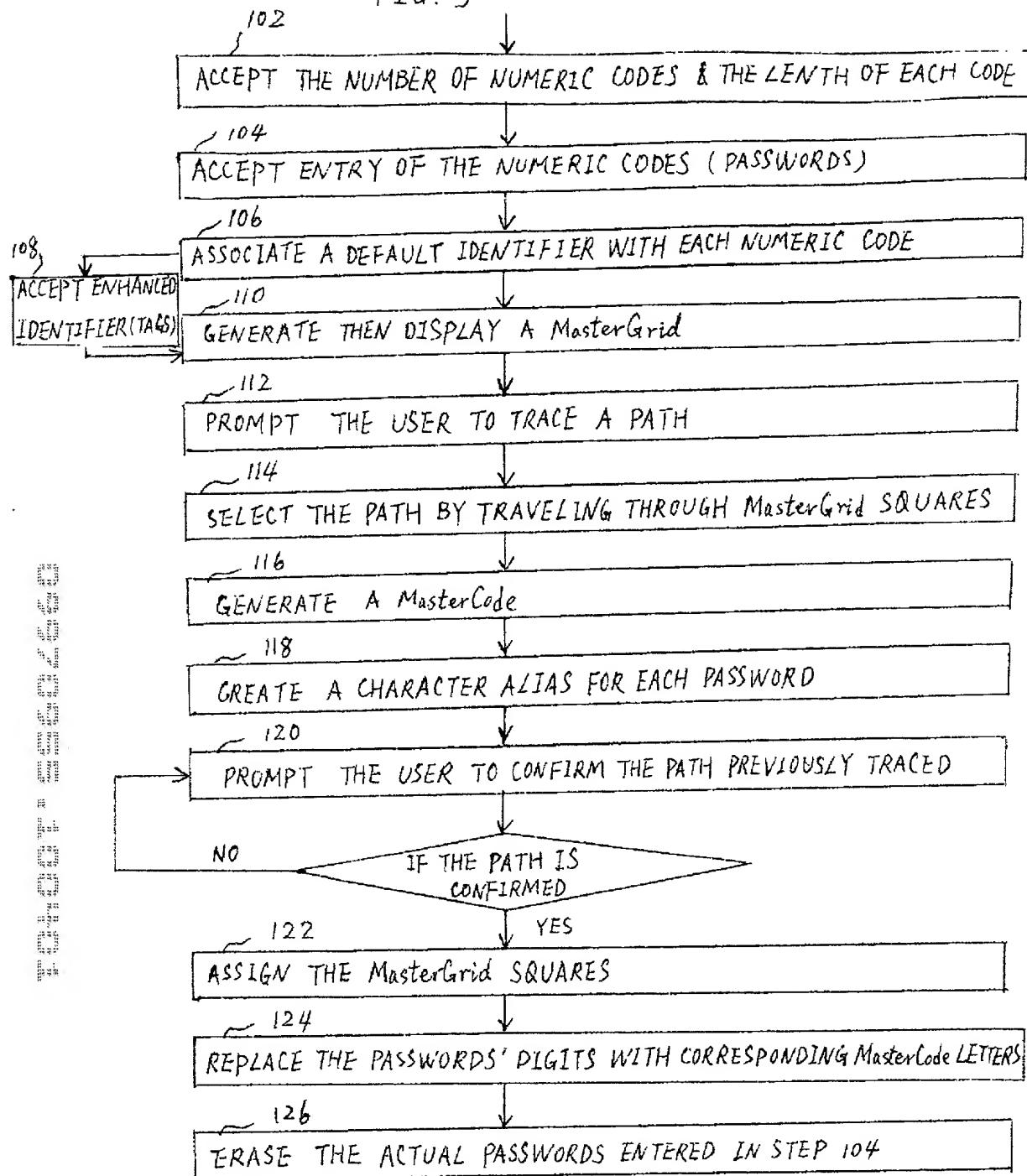


FIG. 6

202
DISPLAY THE USER'S GRID WHEN ACCESS TO A SECURED CODE IS DESIRED

204
PROMPT THE USERS TO TRACE THEIR USER PATH

206
COMPARE THE TRACED PATH WITH THE PREVIOUSLY SELECTED USER PATH

NO

IF THE TRACED PATH CORRESPONDS
TO THE SELECTED USER PATH ?

208
YES

QUERY THE USER FOR WHICH PASSWORD IS TO BE RETRIEVED

210
RETRIEVE THE ENCRYPTED SEQUENCE AND CONVERT THE SEQUENCE

212
DISPLAY THE CONVERTED(ORIGINAL)PASSWORD

214
CAUSE THE DISPLAYED PASSWORD TO BLINK

216
BLANK OUT THE DISPLAYED PATHWORD

ENTER A RESET MODE

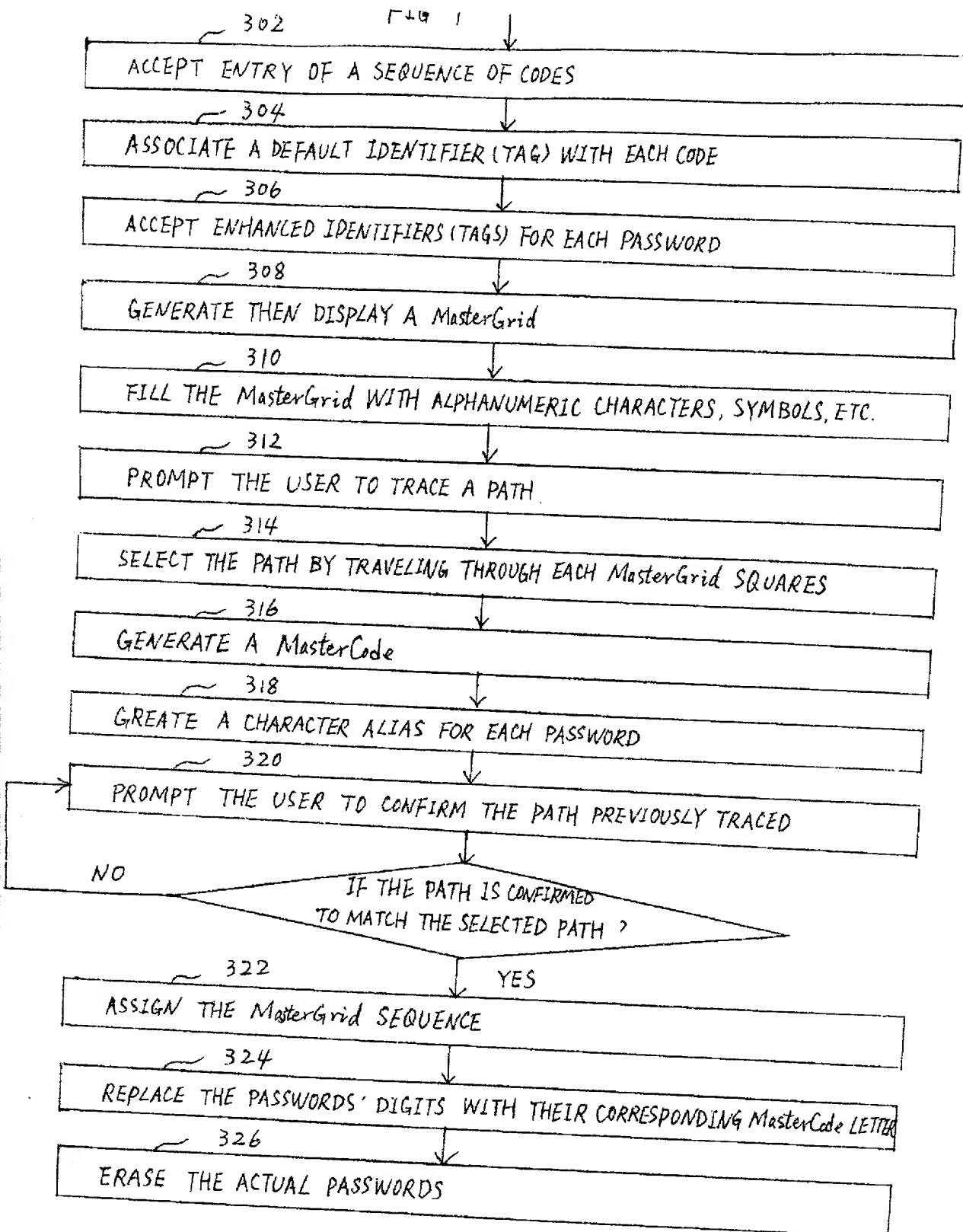


FIG. 8

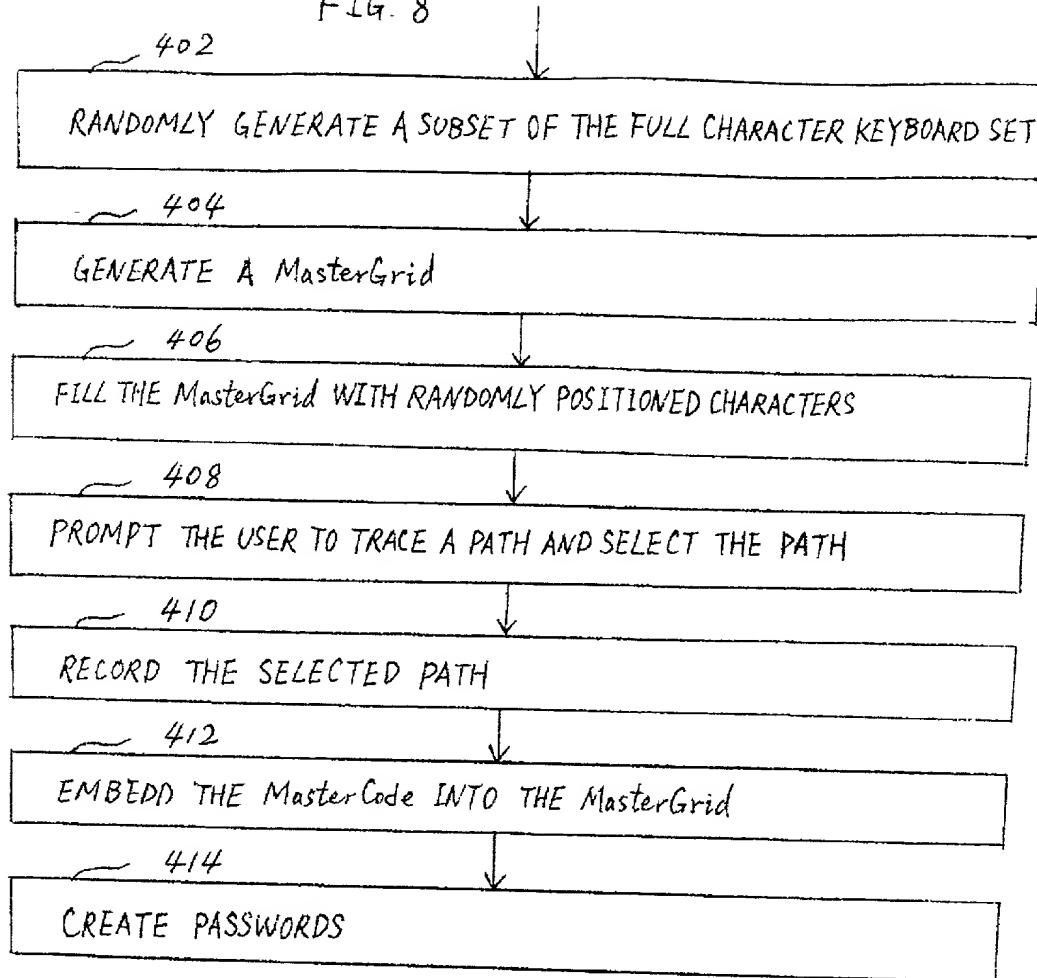


FIG. 9

502

THE CONTROLLING APPLICATION 602 GENERATE A RANDOMIZED MasterGrid 604

504

COMMUNICATE TO A SLAVE UNIT 606

506

SLAVE UNIT 606 STORES IN MEMORY 608 THE MasterGrid

508

SLAVE UNIT CREATE A PATHWAY 610 THROUGH THE MasterGrid

510

THE PATHWAY 610 COMMUNICATE TO THE CONTROLLING APPLICATION 602

512

THE CONTROLLING APPLICATION 602 STORES IN MEMORY 612 THE PATHWAY 610

514

QUERY THE CONTROLLING APPLICATION 602

516

PLACE THE QUERY SLAVE 601 IN A HOLDING STATUS

518

ASK THE QUERY SLAVE 606 FOR THE QUERY SLAVE'S STORED MasterGrid

DENY
THE ACCESS

NO

IF THE MasterGrid SUPPLIED
BY THE QUERY SLAVE CORRESPONDS TO THE MasterGrid
IN THE LOOKUP LIST ?

YES

520

ASK THE QUERY SLAVE TO TRACE ITS PATH 610

NO

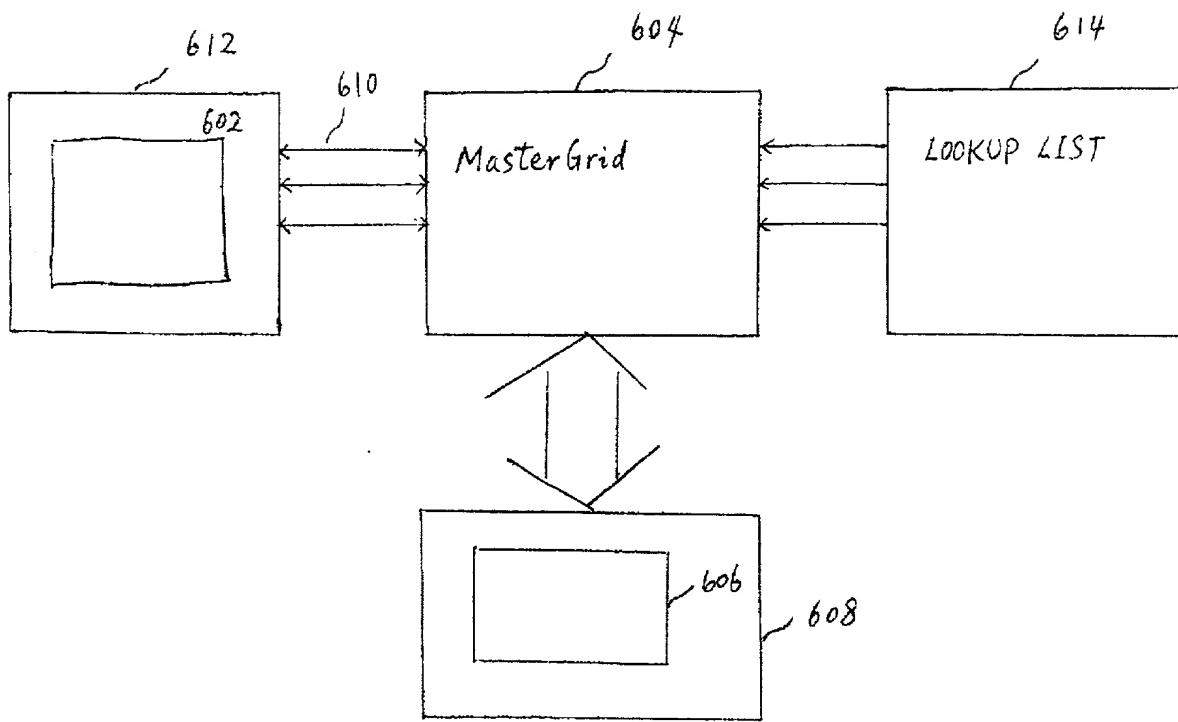
IF THE CONTROLLING APPLICATION 602
CONFIRM THE TRACE OF THE PATH IS CORRECT ?

YES

522

AUTHENTICATE THE QUERY SLAVE 606 AND PROVIDE THE ACCESS

FIG. 10



A

B

C

MasterCode

N r B p l Q s : 9 & 2 d _ T x ← 700

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Fig 11

67

↗
702

704

Fig 12

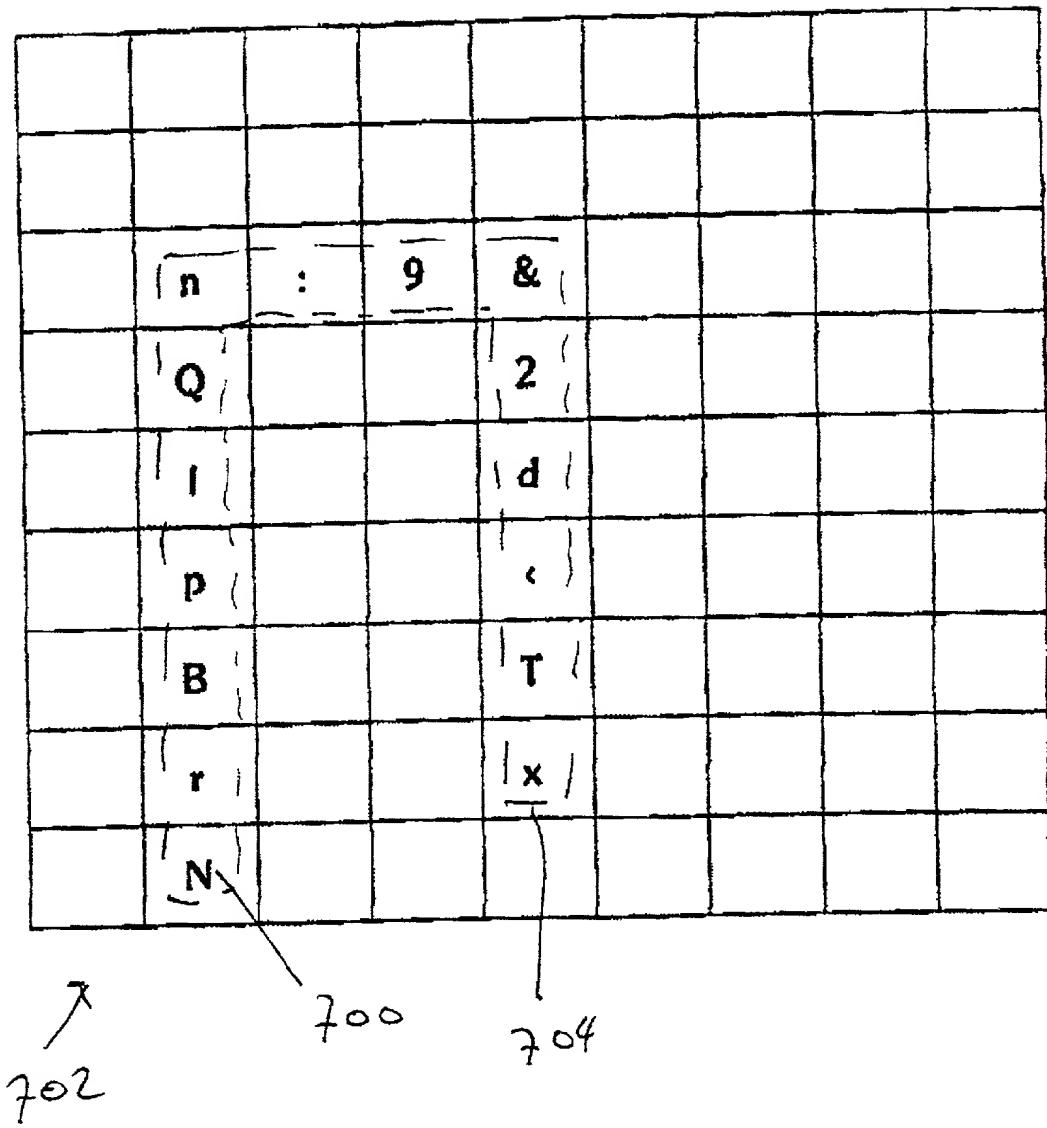


Fig 13

[F]

706

f	)	/	!	8	t	v	b	F
j	}	O	4	%	M	H	k	{
s	n	:	9	&	J	0	-	#
Y	Q	I	m	2	L	a	6	?
E	I	y	X	d	z	e	C	3
g	p	V	A	<	q	S	(	R
7	B	\$	,	T	]	-	h	G
W	r	D	w	x	Z	5	c	o
U	N	@	u	[	i	P	K	*

Fig 14

[G]

MasterCode

N r B p l Q s : 9 & 2 d _ T x

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

n 1 T : p -> 08

x N d Q 9 - 7 11

2 _ B & r - 7 09

r 2 T 9 1 - 7 12

Q B T p - 7 10

Fig 15

[H]

MasterCode

Nr bplQs: 9 & 2d_Tx - 700

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

n 1 T : p - 708
07 05 14 08 04

x N d Q 9 - 711
15 01 12 06 02

2 - B & r - 709
11 13 03 10 02

r 2 T 9 1 - 712
02 11 14 09 05

Q B T p - 710
06 03 14 04

Fig 16

17	8	9	10
6			11
5			12
4			13
3			14
2			15
1			

202 202
N_r B_n

N r B p l Q s : 9 & 2 d < T x - 700
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

n 1 T : p - 708
07 05 14 08 04

x N d Q 9-711
15 01 12 06 09

2 < B & r - 701
11 13 03 10 02

2 2 T 9 1 - 712
02 11 14 09 05

Q B T p - 710
06 03 14 04

Fig 17

Fig. 18

JK

f	)	/	!	8	t	v	b	F
j	}	O	4	%	M	H	k	{
s	n	:	9	&	J	0	-	#
Y	Q	I	m	2	L	a	6	?
E	I	y	X	d	z	e	C	3
g	p	V	A	<	q	S	(	R
7	B	\$	,	T	]	-	h	G
W	r	D	w	x	Z	5	c	o
U	N	@	u	[	i	P	K	*

↗
706

07 05 14 08 04
15 01 12 06 09
11 13 03 10 02
02 11 14 09 05
06 03 14 04

Fig. 19